

Roll No. ....

**23074**

**M. Tech. 3rd Semester (Computer Engg.)**

**Examination – January, 2016**

**KNOWLEDGE BASED SYSTEM DESIGN**

**Paper : MTCE-701-A**

***Time : Three Hours ]***

***[ Maximum Marks : 100***

*Before answering the questions, candidates should ensure that they have been supplied the correct and complete question paper. No complaint in this regard, will be entertained after examination.*

***Note :*** Attempt any *five* questions. All questions carry equal marks.

**1. Describe the following :**

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(i) Hypothesis

(ii) Database

(iii) Truth Table

(iv) Normal Forms

(v) Resolution

2. (i) What do you mean by Herbrand universe ?  
Explain. 10
- (ii) Explain in detail about the process Unification. 10
3. Explain the following : 20
- (i) Frames
- (ii) Scripts
- (iii) Conceptual Dependency
4. (i) What do you mean by frame based systems ?  
Explain. 10
- (ii) Explain in detail about the significance of  
knowledge representation. 10
5. (i) Define uncertainty. How it is managed in Expert  
System ? 10
- (ii) State & Prove Bayes Theorem. 10
6. (i) Explain in detail about DFS and BFS. 10
- (ii) Give a complete description about Hill Climbing  
algorithm. 10
7. Explain the following : 20
- (i) Fuzzy Logic
- (ii) Dempster Shafer Theory.

8. Write short notes on following :

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- (i) Heuristic search
- (ii) Thematic role frames
- (iii) Bayesian Network
- (iv) FOPL
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